



US006607840B2

(12) **United States Patent**
Shu et al.

(10) **Patent No.:** **US 6,607,840 B2**
(45) **Date of Patent:** **Aug. 19, 2003**

(54) **REDUNDANTLY CONSTRAINED LAMINAR
STRUCTURE AS WEAK-LINK
MECHANISMS**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 103 days.

(21) Appl. No.: **09/930,699**

(22) Filed: **Aug. 15, 2001**

(65) **Prior Publication Data**

US 2002/0060200 A1 May 23, 2002

Related U.S. Application Data

(60) Provisional application No. 60/239,599, filed on Oct. 11,
2000.

(51) **Int. Cl.**⁷ **H01L 29/06**; H01L 29/12;
B23B 15/18

(52) **U.S. Cl.** **428/591**; 428/571; 428/620;
428/638

(58) **Field of Search** 428/571, 638,
428/591, 620; 216/41

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(57) **ABSTRACT**

Redundantly constrained laminar structures as weak-link mechanisms and a novel method for manufacturing the redundantly constrained laminar structures as weak-link mechanisms are provided. The method for producing the redundantly constrained laminar structures as weak-link mechanisms is carried out by lithographic techniques. A designed pattern is repeatedly chemically etched with a mask to produce a plurality of individual identical units. The units are stacked together to form the laminar structure and are secured together with fasteners. A high quality adhesive can be applied to the sides of the laminar structure to provide the mechanism equivalent to a single piece mechanism. The redundantly constrained laminar structures as weak-link mechanisms of the invention include a stack of a plurality of thin material structures. The stack of structures forming a laminar structure include multiple weak-link connections providing controllable movements in a plane of the layer and having a desired stiffness and stability. The plurality of thin material structures include predetermined locating-holes used with locating-pins to precisely stack the thin material structures together and are used with fasteners to secure the stack together.

5 Claims, 4 Drawing Sheets

